



Science Progression of Skills

Year 5



Year 5 National Curriculum Objectives for Science: Children will be taught to:

Year 5 Working Scientifically:

Should be taught to use the following practical scientific methods, processes and skills:

- In groups, plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (some children will be given labelled axes).
- Using test results to make predictions to set up further investigations.
- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations in oral and written forms.
- Identifying scientific evidence that has been used to support or refute ideas or arguments. Eg: Make a prediction and at the end of the investigation refer back to it and see if the evidence they have collated supports or refutes their original hypothesis.

Programmes of Study

Living Things and their Habitats (Our Wonderful World)

Pupils should be able to:

- describe the differences between life cycles of mammals, amphibians, insects and birds.
- describe the process of reproduction in some plants and animals.

Animals Including Humans (RSE)

Pupils should be able to:

- describe the changes as humans develop to old age

Properties and Changes of Materials (Glass)

Pupils should be able to:

- compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.
- understand that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.
- use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.
- give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- demonstrate that dissolving, mixing and changes of state are reversible changes.
- explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

Earth and Space (Star Gazers)

Pupils should be able to:

- describe the movement of the Earth, and other planets, relative to the Sun in the solar system
- describe the movement of the Moon relative to the Earth
- describe the Sun, Earth and Moon as approximately spherical bodies
- use the idea of the Earth's rotation to explain day and night, and the apparent movement of the sun across the sky.

Forces (Star Gazers)

Pupils should be able to:

- explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object

Light (Glass)

Pupils should be able to:

- recognise that light appears to travel in straight lines
- use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye
- explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes
- use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them

Notes

Children Working Below

Children who are working above objectives listed above